

REMARKS

Upon entry of the present amendment, no claims will have been amended. Additionally, new claims 11-14 will have been submitted for consideration by the Examiner.

In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the outstanding rejections together with an indication of the allowability of all the claims pending in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

Initially, Applicants wish to respectfully thank the Examiner for acknowledging their Claim for Foreign Priority under 35 U.S.C. § 119 and for confirming receipt of the certified copy of the priority document. Applicants further thank the Examiner for approving and accepting the drawings filed in the present application on December 10, 2003. Finally, Applicants respectfully thank the Examiner for considering the documents signed in the Information Disclosure Statement filed in the present application on March 10, 2004 by return of the signed and initialed copy of the PTO-1449 Form attached thereto.

In the outstanding Official Action, the Examiner rejected claim 1 under 35 U.S.C. § 102(b) as anticipated by KUWANA et al. (U.S. Patent No. 5,786,941). Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over KUWANA et al. Claim 10 was rejected under 35 U.S.C. § 103 as unpatentable over KUWANA et al. in view of NOMURA et al. (U.S. Patent No. 5,659,810).

The Examiner objected to claims 2-8 as being dependent upon a rejected base claim but indicated that they would be allowable if rewritten into independent form including all the limitations of the base claim and any intervening claims.

Applicants respectfully thank the Examiner for the indication of allowable subject matter in claims 2-8 but respectfully submit that none of the references of record in the present application contain disclosures adequate or sufficient to either anticipate or even to render unpatentable any of claims 1, 9 and 10. Accordingly, Applicants respectfully traverse the above rejections and respectfully request reconsideration and withdrawal thereof together with an indication of the allowability of all the claims pending in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

Applicants respectfully submit that KUWANA et al. does not disclose a step zoom lens which changes the variable focal length in a step-wise fashion as recited in the claims in the present application. In this regard, Applicants note that according to a feature of the present invention, the zoom lens includes two moveable lens groups and a lens group support unit which supports the two moveable lens groups as well as a cam ring having at least one cam groove such that rotation of the cam ring causes the lens groups support unit to move linearly along the optical axis according to the shape of the cam groove.

According to a further feature of the present invention, the cam groove comprises a finite number of focal length steps for each of a wide angle range and a telephoto range. In addition, the cam groove is shaped (i.e., determined) to perform a focusing operation between an infinite photographing position and a closest

photographing position at each of the focal length steps by rotation of the cam ring. Yet further, the closest photographing positions in two adjacent ones of the focal length steps are adjacent to each other and the infinite photographing positions in two adjacent focal length steps are adjacent to each other. At least the above-noted combination of features explicitly recited in Applicants claim 1 is not taught, disclosed nor rendered obvious by KUWANA et al.

Applicants invention is described in Applicants disclosure and in this regard Applicants respectfully direct the Examiner's attention to the cam groove 15d of which, for example, three can be provided and of which one is shown in most detail in Fig. 19. In this regard, the Examiner's attention is respectfully directed to Applicants specification at, inter alia, page 37, line 13 through page 39, line 7 as well as page 41, line 7 through page 42, line 6 and page 45, lines 5-20.

Directing the Examiner's attention to Fig. 19 which shows an example of one of the bottomed cam grooves 15d, Applicants note that, for example, the wide angle section includes four different focal length steps while the telephoto section includes two focal length steps. For each of the focal length steps, a near focusing position and a far focusing position are shown and are designated by the reference characters n and ∞ . Moreover, as can clearly be seen in Fig. 19, the closest photographing positions in two adjacent ones of the focal length steps are adjacent to each other. This can clearly be seen with reference to steps $1n$ and $2n$ as well as with respect to steps $3n$ and steps $4n$. Similarly, the infinite photographing positions in two adjacent focal length steps are adjacent to each other as can clearly be seen in, for example, steps 2∞ and 3∞ .

It is respectfully submitted that at least this feature, in the claimed combination, is not taught, disclosed nor rendered obvious by the disclosure of KUWANA et al. In this regard, Applicants note that KUWANA et al. relates to a zoom lens system that includes a plurality of lens units. However, KUWANA et al. does not disclose a cam groove defined in the manner set forth in claim 1 of Applicants application. Moreover, it appears quite clear that no such features are contained therein. In this regard, Applicants respectfully direct the Examiner's attention to, e.g., Fig. 9 of KUWANA et al.

Moreover, Applicants respectfully note that the focus position of the lens groups is set in accordance with a number of steps output by the piezoelectric devices 143 and 153. Accordingly, it is respectfully submitted that a cam groove as defined in Applicants claim 1 is clearly not taught, disclosed nor rendered obvious by KUWANA et al. Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection and an indication of the allowability of all the claims pending in the present application, in due course. Such action is respectfully requested and is now believed to be appropriate and proper.

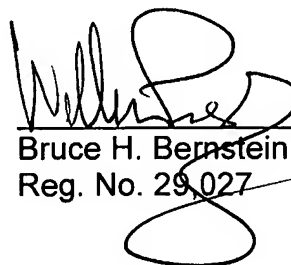
Claims 11-14 have been submitted to afford Applicants the scope of protection to which they are entitled. These claims are submitted to be patentable and an action to such effect is respectfully requested.

SUMMARY AND CONCLUSION

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so. Applicants have not amended the claims but have explained the features of Applicants invention in detail and have submitted several additional claims for consideration. Applicants have discussed the disclosure of the reference relied upon by the Examiner and have pointed out the shortcomings thereof with respect to Applicants claims. Applicants have also discussed the features of Applicants claims and have pointed out the shortcomings and deficiencies of the reference with respect to such recitations. Accordingly, Applicants have provided a clear evidentiary basis supporting the patentability of all the claims in the present application and respectfully request an indication to such effect in due course.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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April 20, 2005
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